

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) A concentrator for voice telephones installed in a LANlocal area network comprising a LANlocal area network switching unit for switching and connecting a plurality of interfaces, and a plurality of LANlocal area network hubs accommodating equipment connected to the LANlocal area network switching unit via the interfaces, respectively, and for performing data communication over the LANlocal area network, said concentrator comprising:

- a LANlocal area network interface connected to the LANlocal area network switching unit;
- ~~at least one voice telephone; and~~
- at least one set of voice telephone interfaces connected to the at least one voice telephone,

wherein digital or analog voice data transmitted and received by the at least one set of the telephone interfaces are converted into MACmedia access control frames or IPinternet protocol packets, and the digital or analog voice data converted into the MACmedia access control frames or IPinternet protocol packets are relayed to the LANlocal area network interface.

Claim 2 (Previously presented) A concentrator for voice telephones according to Claim 1, further comprising:

- a CPUcentral processing unit; and
- a second LANlocal area network interface for performing transmission and reception of data between the CPUcentral processing unit and one of the LANlocal area network hubs.

Claim 3 (Previously presented) A concentrator for voice telephone according to Claim 1, wherein signals from circuits of analog telephone networks subscribers are converted into call control protocols according to ~~TCP~~transmission control protocol – ~~IP~~internet protocol so as to be able to accommodate the analog telephone subscribers' terminals.

Claim 4 (Currently Amended) A concentrator for voice telephone according to Claim 1, further comprising:

a ~~CPU~~central processing unit; and
a second ~~LAN~~local area network interface for performing transmission and reception of data with the ~~CPU~~central processing unit and wherein the digital or analog voice data received from the at least one voice telephone is converted into ~~TCP~~transmission control protocol – ~~IP~~internet protocol packets or ~~UDP~~user datagram protocol – ~~IP~~internet protocol packets, and the ~~TCP~~transmission control protocol – ~~IP~~internet protocol packets or ~~UDP~~user datagram protocol – ~~IP~~internet protocol packets are transmitted and received via the second ~~LAN~~local area network interface.

Claim 5 (Previously presented) A concentrator for voice telephones according to Claim 4, further comprising a router connected to the second ~~LAN~~local area network interface for connecting the second ~~LAN~~local area network interface to either the outside of the ~~LAN~~local area network or the ~~LAN~~local area network hubs.

Claim 6. (Previously presented) A method of communication over a LANlocal area network comprising a plurality of LANlocal area network hubs coupled to computing equipment for performing data communication, a plurality of concentrators coupled to voice telephones, and a LANlocal area network switching unit, having a plurality of ports and for switching and connecting between the plurality of the LANlocal area network hubs, and the plurality of the concentrators for voice telephones, the method comprising the step of:

performing call control for the voice telephones coupled to each of the concentrators with the computing equipment in each of the LANlocal area network hubs wherein the case that a response from a PC or work station on the call-in side is not obtained, arrival of a call request is notified, and the response is detected by use of control channel signals of a voice telephone interface on the call-in side.

Claims 7-9 (canceled)

Claim 10 (Currently amended) A telecommunication apparatus for voice telephones installed in a LANlocal area network including a plurality of LANlocal area network equipment, the telecommunication apparatus comprising:

at least one LANlocal area network interface coupled to the LANlocal area network equipment;

a CPUcentral processing unit;

~~at least one voice telephone;~~

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPUcentral processing unit and ~~the~~ at least one voice telephone, wherein the CPUcentral processing unit is adapted to convert the digital and analog voice data or call control data into IPinternet protocol packets or MACmedia access control frames and transmit the IPinternet protocol packets or MACmedia access control frames to the at least one LANlocal area network interface wherein the set of voice telephone interfaces are adapted to perform a BORSCHT function.

Claim 11 (Previously presented) The telecommunications apparatus of claim 10, further comprising a router connected to at least one LANlocal area network interface and to a LANlocal area network hub or outside of the LANlocal area network.

Claim 12 (Previously presented) The telecommunications apparatus of claim 10, wherein the LANlocal area network equipment includes one of a LANlocal area network hub and a LANlocal area network switching unit.

Claim 13 (Previously presented) The telecommunications apparatus of claim 10, further comprising a LANC circuit coupled to the CPUcentral processing unit and voice telephone interface for assembling and disassembling a MACmedia access control frame.

Claim 14 (Previously presented) The telecommunications apparatus of claim 10, wherein the call control data are converted into a call control protocol according to TCPtransmission control protocol/IPinternet protocol.

Claim 15 (Currently amended) A telecommunication apparatus for voice telephones installed in a LANlocal area network including a plurality of LANlocal area network equipment, the telecommunication apparatus comprising:

at least one LANlocal area network interface coupled to the LANlocal area network equipment;

a CPUcentral processing unit;

~~at least one voice telephone;~~

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPUcentral processing unit and ~~the~~ at least one voice telephone, wherein the CPUcentral processing unit is adapted to convert the digital and analog voice data or call control data into TCPtransmission control protocol/IPinternet protocol packets or UDPuser datagram protocol/ IPinternet protocol packets and transmit the packets to the at least one LANlocal area network interface.

Claim 16 (Previously presented) The telecommunications apparatus of claim 15, further comprising a router connected to the at least one LANlocal area network interface and to a LANlocal area network hub.

Claim 17 (Previously presented) The telecommunications apparatus of claim 15, further comprising a router connected to the at least one LANlocal area network interface and to an external network.

Claim 18 (Previously presented) A method of communication over a LANlocal area network, comprising:

receiving and transmitting digital and analog voice data or call control data between a voice telephone interface and a voice telephone;

receiving and transmitting the digital and analog voice data or call control data between the voice telephone interface and a CPUcentral processing unit;

converting the digital and analog voice data or call control data into IPinternet protocol packets or MACmedia access control frames with the CPUcentral processing unit; and

transmitting the IPinternet protocol packets or MACmedia access control frames from the CPUcentral processing unit to a LANlocal area network interface.

Claim 19 (Previously presented) The method of claim 18, further comprising transmitting the IPinternet protocol packets or MACmedia access control frames from the LANlocal area network interface to a router.

Claim 20 (Previously presented) The method of claim 19, further comprising transmitting the IPinternet protocol packets or MACmedia access control frames from the router to an external network.

Claim 21 (Previously presented) The method of claim 18, further comprising transmitting the ~~IP~~internet protocol packets or ~~MAC~~media access control frames to a ~~LAN~~local area network hub.

Claim 22 (Previously presented) The method of claim 18, further comprising converting the digital and analog voice data into ~~TCP~~transmission control protocol/~~IP~~internet protocol packets or ~~UDP~~user datagram protocol/~~IP~~internet protocol packets with the ~~CPU~~central processing unit.

Claim 23 (new) A concentrator for voice telephones according to Claim 1, further comprising: a database coupled to the local area network switching unit or the local area network hubs and storing media access control addresses for clients of the local area network and providing the addresses in response to inquires.

Claim 24 (new) The method of claim 18, wherein time slots for the digital and analog voice data or call control data are converted into the internet protocol packets or media access control frames.